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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _21 November 2008_.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1 - 53_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1 - 53_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
           application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 11/21/2008 have been fully considered but they are

not persuasive. Where applicant argues in page 13 of the remarks section that Barnett

fails to disclose threshold amount this is disclosed by Barnett in column 5 lines 18 – 33,

where it describes how their system compares the input value to a stored value thus

would mean that the value it is comparing it to is the threshold value. Applicant further

argues that Barnett does not display an assistance message but the claim 1 states,

"displaying an assistance message to the aircraft operator, the assistance message

including at least one of a complying input and an instruction for creating a complying

input." Thus it can be either a complying input or an instruction for creating a complying

input, as Barnett does disclose this limitation in column 5 lines 17 – 33; where it

describes how their system after comparing the inputted value with the stored value and

if it determined the code value is wrong the writes a error message to the display. Then

the system clears the inputted value to allow for the user to reenter the correct value

thereby meeting applicants claimed limitation of "a complying input." Further more a

"complying input" is taken to mean that the system warns the user to an error and thus

the user enters a new input into the system to ensure the value is correct, thus

complying with the systems request. Therefore applicant's arguments are not

persuasive.

2.   Where applicant argues in "for example, claim 15 includes "providing a first

assistance message if the input fails to comply ... on a first basis" and "providing a

second assistance message ... if the input fails to comply.., on a second basis .... "

Applicants respectfully submit that the references fail to disclose or suggest providing

separate assistance messages depending on the basis by which the input fails to

comply with the target characteristic, as included in claim 15." This is disclosed by

Barnett in column 5 lines 11 – 34 & column 4 lines 44 – 53, where it describes how the

system which is not limited and can also be used in other systems and thus would allow

for the system to warn of other errors that may need correcting, Also shown in Fig 6.

Response to Amendment

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1 – 6, 8 – 11, 23 – 29, 32 – 33, 38 & 49 are rejected under 35

U.S.C. 102(b) as being anticipated by Barnett US Patent 5,416,705.

Regarding claim 1 where it is disclosed by Barnett in column 2 lines 3 – 35 to

have a method of allowing their system to accept inputs from an aircraft operator.

Further more this input being in alphanumeric form, and this being read upon by

applicant's claim to, "receiving an input from an aircraft operator at an aircraft flight

deck; comparing a characteristic of the input to at least one target value for the

characteristic." It is also disclosed by Barnett to have a system, which can used the

inputted information to compare it to a stored value to determine if an action needs to be

carried out as is described in column 5 lines 17 – 33. This is read upon by applicant's

claim to, "if the characteristic of the input differs from the at least one target value for the

characteristic by at least a threshold amount, displaying an assistance message to the

aircraft operator, the assistance message including at least one of a complying input

and an instruction for creating a complying input."

Regarding claim 2 where it is disclosed by Barnett to have a system that is able

to display a message to a display screen in regards to the inputted information, this is

whilst it is showing the information that is being entered by the operator. This is read

upon by applicants claim to, "displaying an assistance message includes displaying an

assistance message at least proximate to and simultaneously with displaying the input

[column 5 lines 17 – 33]."

Regarding claim 3 where in the abstract of Barnett's disclosure it described how

the system allows the user to input alpha numeric characters into the system. This read

upon by applicant's claim to, "receiving an input includes receiving an input that includes

alphanumeric characters."

Regarding claim 4 where it is described by Barnett to have their system change

the values depending on the reference value they have in the system and what the user

has entered into the alphanumeric keypad. This is read upon by applicant's claim to,

"activating the input if the characteristic of the input does not differ from the at least one

target value, or differs from the at least one target value by less than the threshold

amount. [Column 5 lines 17 – 33]."

Regarding claim 5 where it is disclosed by Barnett to have their system be capable of carrying out the step of presenting the entered values from the alphanumeric keypad to the screen as described in column 5 lines 17 – 33. This is read upon by applicant's claim to, "presenting the input at an active display field if the characteristic of the input does not differ from the at least one target value, or if the characteristic of the input differs from the at least one target value by less than the threshold amount."

Regarding claim 6 where it is disclosed by Barnett to have a system that is able to carry out the steps of figuring out how much the change of the value is from the entered values into the system to the current settings and displaying this on a screen, as described in column 5 lines 17 – 33. This is read upon by applicant's claim to, "comprising activating the input if the characteristic of the input does not differ from the at least one target value, or if the characteristic of the input differs from the at least one target value by less than the threshold amount, and wherein activating the input includes directing a change in a characteristic of the aircraft."

Regarding claim 8 where it is disclosed by Barnett in column 5 lines 17 – 33 to have the system compare what is entered to what is already being displayed on the screen for the aircraft settings. This is read upon by applicant's claim to, "comparing a characteristic includes comparing a format of the input to a target format."

Regarding claim 9 where it is disclosed by Barnett, in column 5 lines 17 – 33, to have their system compare the values entered into the keypad to values set in a database and thus is read upon by applicant's claim to, "comparing a characteristic

includes comparing a number of characters in a character string to a target number of characters."

Regarding claim 10 where it is described by Barnett to have their system "compare" the already entered character with the new one being entered from a database as is described in column 5 lines 17 - 33. This is read upon by applicant's claim to, "comparing a characteristic includes comparing a type of character in a character string to a target type of character."

Regarding claim 11 where it is described by Barnett to have their system "compare" the value that is entered into the system to the value that is already in the system, as described in column 5 lines 17 – 33. This is read upon by applicant's claim to, "comparing a characteristic includes comparing a numerical value to a target numerical value."

Regarding claim 13 where when the user entered some data incorrectly it displays and error message as is described in column 5 lines 17 - 33. This is read upon by applicant's claim to, "comprising displaying the same assistance message for all non-complying inputs provided to fulfill data requests of a predetermined type."

Regarding claim 23 where it is described by Barnett to have their system display messages on the aircraft multifunctional display as shown in Fig 1. This is read upon by applicant's claim to, "displaying the assistance message includes displaying the assistance message at a multi-function display of the aircraft flight deck."

Regarding claim 24, this has the same limitations as that of claims 1 & 4 and is therefore rejected for the same reasons as stated for claims 1 & 4 above.

Regarding claim 25 where in Figure 6 of Barnett's disclosure it describes how the
system activates a filed in which data is being entered and thus is read upon by
applicant's claim to, "activating the input includes presenting the input at an active
display field."

Regarding claim 26, this has the same limitations as that of claim 8 and is
therefore rejected for the same reasons as stated for claim 8 above.

Regarding claim 27, this has the same limitations as that of claim 9 and is
therefore rejected for the same reasons as stated for claim 9 above.

Regarding claim 28, this has the same limitations as that of claim 10 and is
therefore rejected for the same reasons as stated for claim 10 above.

Regarding claim 29, this has the same limitations as that of claim 11 and is
therefore rejected for the same reasons as stated for claim 11 above.

Regarding claim 32 where it is described by Barnett to have their system display
messages on the aircraft multifunctional display as shown in Fig 1. This is read upon by
applicant's claim to, "displaying the assistance message includes displaying the
assistance message at a multi-function display of the aircraft flight deck."

Regarding claim 33 which is the system for the corresponding method claim of
claim 1 & 24 and is there fore rejected for the same reasons as stated for claim 1 & 24
above.

Regarding claim 38 which is the corresponding computer method claim for
method claims 1 & 24 and is therefore rejected for the same reasons as stated fro
claims 1 & 24 above.

Regarding claim 49 which is the system for the corresponding method claim of claim 1 & 24 and is there fore rejected for the same reasons as stated for claim 1 & 24 above.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 12 & 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnett.

Regarding claim 12 where it all the limitations of claim 1 are disclosed by Barnett who does not specifically disclose the further limitation of, "displaying a message includes displaying a plurality of sample complying inputs." However Barnett does discloses displaying values entered by the user. Thus it would have been obvious to one of ordinary skill at the time of invention to modify Barnett with the known art of displaying how one should enter data into the system, as this would have yield predictable results and would not required undue experimentation. (Please see MPEP 2143).

Regarding claim 30, this has the same limitations as that of claim 12 and is therefore rejected for the same reasons as stated for claim 12 above.

7.   Claim 7, 16 - 18 & 21 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Barnett and further in view of Middleton et al. US Patent 5,499,025 (hereafter

referenced as Middleton).

        Regarding claim 7 where all the limitations of claim 1 are disclosed by Barnett

who does not specifically disclose the further limitation of, "comprising activating the

input if the characteristic of the input does not differ from the at least one target value, or

if the characteristic of the input differs from the at least one target value by less than the

threshold amount, and wherein activating the input includes directing a change in at

least one of a speed, altitude and flight path of the aircraft."

        This is disclosed by Middleton where they describe how their system is capable

of allowing the operator to input changes to the parameters of the aircrafts flight. This is

indicated as follows: "comprising activating the input if the characteristic of the input

does not differ from the at least one target value, or if the characteristic of the input

differs from the at least one target value by less than the threshold amount, and wherein

activating the input includes directing a change in at least one of a speed, altitude and

flight path of the aircraft. [Column 12 lines 22 – 67 and shown in Figs 8C-D & 9A-C]."

        Therefore it would have been obvious to one of ordinary skill at the time of

invention to modify Barnett by the teachings of Middleton to enable the system to warn

the pilot of entering data incorrectly such as typographical errors for safety reasons.

Thus it would have been obvious to one of ordinary skill in the art to take two well

known techniques with out undue experimentation and have predictable results.

(Please see MPEP 2143).

Regarding claim 16 where all the limitations of claim 1 are disclosed by Barnett who does not specifically disclose the further limitation of, "displaying an assistance message includes displaying multiple criteria associated with a complying input."

This is disclosed by Middleton in Figs 7A-E, 8A-B, 9A-D, 10A-B & 11, where it can be seen that the system is able to display a message in regards to what data has been entered. Thus it would have been obvious to one of ordinary skill at the time of invention to modify Barnett by the known teachings of Middleton to produce predictable results without undue experimentation. (Please see MPEP 2143).

Regarding claim 17 where all the limitations of claim 1 are disclosed by Barnett who does not specifically disclose the further limitation of, "displaying an assistance message includes displaying an indication of a single criterion associated with a complying input when the input received at the aircraft flight deck fails to comply with the single criterion."

This is shown by Middleton in Figs 7 – 11 where it can be seen that the system will issue warns when the entered information is incorrect. Thus it would have been obvious to one of ordinary skill at the time of invention to modify Barnett by the known teachings of Middleton to allow the system to display warns when data is entered incorrectly and thus prevent an accident. Thus it would have been obvious to one of ordinary skill in the art to use the teachings of Middleton without undue experimentation and predictable results. (Please see MPEP 2143).

Regarding claim 18 where all the limitations of claim 1 are disclosed by Barnett who does not specifically disclose the further limitation of, "displaying the assistance

message includes displaying at least one of a number of characters for a complying

input, at least one alphabetic character for a complying input, and at least one numerical

character for a complying input." This is rejected for the same reasons as stated for

claim 17 above.

Regarding claim 21 where all the limitations of claim 1 are disclosed by Barnett

who does not specifically disclose the further limitation of, "displaying the input at a first

location of the aircraft flight deck; and displaying the assistance message at a second

location of the aircraft flight deck, the second location being at least proximate to the

first location."

This is disclosed by Middleton in Fig 1 where it can be seen that the system can

display multiple items on one screen. Thus it would have been obvious to one of

ordinary skill at the time of invention to modify Barnett by the teachings of Middleton to

allow the system to display multiple items on one screen as was well known in the art at

the time of invention. The combination of Barnett and Middleton would have yield

predictable results with out undue experimentation. (Please see MPEP 2143).

8.   Claims 14, 15 & 53 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Barnett in further view of Brame US Patent 4,224,669.

Regarding claim 14 where all the limitations of claim 1 are disclosed by Barnett

who does not specifically disclose the further limitation of, "comprising displaying a first

assistance message for all non-complying inputs provided to fulfill data requests of a

first type; and displaying a second assistance message different than the first

assistance message for non-complying inputs provided to fulfill data requests of a second type different than the first type."

This is disclosed by Brame as described in columns 2 & 3 lines 55 – 68 & 1 – 54 respectively. Thus it would have been obvious to one of ordinary skill at the time of invention to modify Barnett by the teachings of Brame to ensure the safety of passengers and crew by stopping typographical errors.

Regarding claim 15 where all the limitations of claim 15 are disclosed by Barnett who does not specifically disclose the further limitation of, "providing a first assistance message if the input fails to comply with the target characteristic on a first basis; and providing a second assistance message different than the first assistance message if the input fails to comply with the target characteristic on a second basis different than the first basis."

This is disclosed by Brame as described in columns 2 & 3 lines 55 – 68 & 1 – 54 respectively. Thus it would have been obvious to one of ordinary skill at the time of invention to modify Barnett by the teachings of Brame to ensure the safety of passengers and crew by stopping/preventing typographical errors.

Regarding claim 53 where all the limitations of claim 24 are disclosed by Barnett who does not specifically disclose the further limitation of, "providing a first assistance message if the input fails to comply with the target characteristic on a first basis; and providing a second assistance message different than the first assistance message if the input fails to comply with the target characteristic on a second basis different than the first basis."

This is disclosed by Brame as described in columns 2 & 3 lines 55 – 68 & 1 – 54 respectively. Thus it would have been obvious to one of ordinary skill at the time of invention to modify Barnett by the teachings of Brame to ensure the safety of passengers and crew by stopping/preventing typographical errors.

9.   Claims 19, 20, 22 & 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnett and further in view of Oder et al. US Patent 5,475,594 (hereafter referenced as Oder).

Regarding claim 19 where all the limitations of claim 1 are disclosed by Barnett who does not specifically disclose the further limitation of, "wherein a complying input includes a data element and a modifier, and wherein displaying the assistance message includes indicating the position of the modifier relative to the data element for a complying input."

This is disclosed by Oder in column 12 lines 6 – 33 where it can be seen that they describe how the entered value will affect the aircraft. In this case how not finishing a current check list will indicate a warning to instruct then to finish it. Thus it would have been obvious to one of ordinary skill at the time of invention to use Barnett's aircraft multifunctional display system with Oder's system ability to warn pilots that they have an error, would have resulted in predictable results and would not have required undue experimentation. (Please see MPEP 2143).

Regarding claim 20 where all the limitations of claim 1 are disclosed by Barnett who does not specifically disclose the further limitation of, "receiving a request for a

change in a characteristic of the assistance message; and changing the characteristic of
the assistance message."

This is disclosed by Oder where in column 12 lines 6 – 33 it discloses how the
system would warn the operator that they have not completed a check in the aircraft
system and thus it would have been obvious to one of ordinary skill at the time of
invention to modify Barnett by the teachings of Oder to allow a built in safe guard to
prevent an accident by the operator due to an typographical error. The combination of
the known methods of Barnett and Oder would yield predictable results and would not
require undue experimentation. (Please see MPEP 2143).

Regarding claim 22 where all the limitations of claim 1 are disclosed by Barnett
who does not specifically disclose the further limitation of, "the input includes a first
input, and wherein the method further comprises: receiving a second input, the second
input being a complying input; and ceasing to display the assistance message after
receiving the second input."

This is disclosed by Oder who in column 12 lines 6 – 33 discloses how their
system is able to stop showing the warning message once the operator has fulfilled the
requirements of that particular message. Therefore it would have been obvious to one
of ordinary skill at the time of invention to modify Barnett by the teachings of Oder to
incorporate the known teachings of removing a message from the screen once the
criteria has been fulfilled as shown by Oder, incorporated with Barnett to yield
predictable result with out undue experimentation. (Please see MPEP 2143).

Regarding claim 31 where all the limitations of claim 24 are disclosed by Barnett who does not specifically disclose the further limitation of, "the input includes a first input, and wherein the method further comprises: receiving a second input, the second input being a complying input; and ceasing to display the assistance message after receiving the second input."

This is disclosed by Oder who in column 12 lines 6 – 33 discloses how their system is able to stop showing the warning message once the operator has fulfilled the requirements of that particular message. Therefore it would have been obvious to one of ordinary skill at the time of invention to modify Barnett by the teachings of Oder to incorporate the known teachings of removing a message from the screen once the criteria has been fulfilled as shown by Oder, incorporated with Barnett to yield predictable result with out undue experimentation. (Please see MEP 2143).

Regarding claims 34 – 37 which are the system claims for corresponding method claims and are therefore rejected fro the same reasons as stated for their corresponding method claims.

Regarding claims 39 – 48 this is the corresponding computer program method steps for the method step above and are therefore rejected for the same reasons as stated above.

Regarding claims 50 – 52 which are the corresponding apparatus for methods claims stated above and are therefore rejected fro the same reasons as stated above.

Conclusion

10.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to BHAVESH AMIN whose telephone number is (571)270-

3255. The examiner can normally be reached on M - T, Friday off, 7:30am to 6:00pm,

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Khoi Tran can be reached on 571-272-6919. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. A./
Examiner, Art Unit 3664 (01/30/2009)
/KHOI TRAN/
Supervisory Patent Examiner, Art Unit 3664